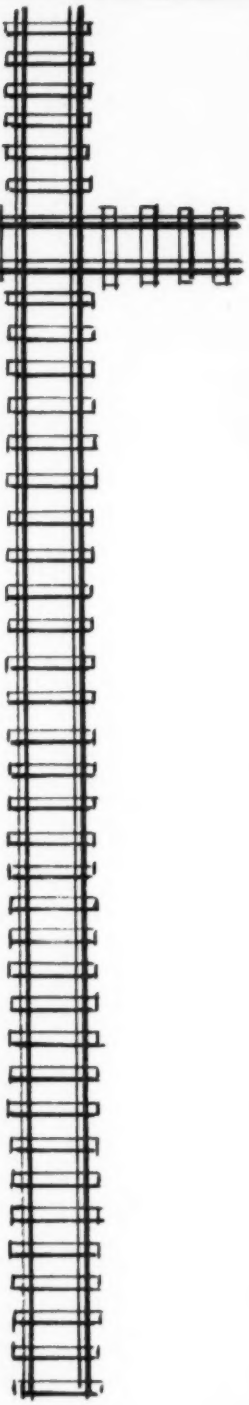
ACI News Letter

Vol. 28, No. 7 JOURNAL of the AMERICAN CONCRETE INSTITUTE January 1957

guide to Intrusion-Prepakt maintenance services:



TUNNELS—relining, restoring and grouting lined and unlined tunnels.

BRIDGES — maintaining, strengthening or replacing.

CONCRETE STRUCTURES — rehabilitating deteriorated concrete and masonry structures.

FOUNDATION STABILIZATION—underpinning, scour correction, grouting, bearing and cut-off piles.

• Many of America's leading railroads have discovered the advantages of using INTRUSION-PREPAKT methods and materials:

minimum or no traffic interruptions . . . labor and material cost savings . . . PREPAKT concrete's exceptional bond to old concrete and its extreme resistance to weathering . . . placement in difficult locations . . . speedy completion of projects.

For better maintenance at less cost, contact: INTRUSION-PREPAKT, INC., Room 568, Union Commerce Bldg., Cleveland 14, Ohio. In Canada: INTRUSION-PREPAKT, LTD., 159 Bay Street, Toronto, Ontario.

INTRUSION-PREPAKT, INC.

OFFICES IN PRINCIPAL U. S. AND FOREIGN CITIES

Intrusion and Prepakt are trade marks of Intrusion-Prepakt, Inc., whose methods and materials are covered by U. S. Patents Nos. 2313110, 2655004, 2434302 and others, also patents pending.

ACI

News Letter Contents

January 1957

On the Cover—Just a reminder for ACI members to participate in the 53rd annual convention coming up February 25-28 in Dallas, Texas. Topnotch concrete research men and leaders in the industry will exchange construction ideas and technical data. Awards will be presented, also. See stories, pp. 3 and 6.

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1957 Awards Time

Reese, Goldbeck, Tuthill, Cordon, Lauer, Slate, Clark to be honored at Dallas convention

1957 ACI award recipients have been announced by the Board of Direction following approval of the Awards Committee report. Raymond C. Reese, Albert T. Goldbeck, Lewis H. Tuthill, William A. Cordon, Kenneth R. Lauer, Floyd O. Slate, and Roy R. Clark will be honored for achievement during activities at the 53rd annual convention to be held in Dallas, February 25-28.

The Alfred E. Lindau Award will be presented to Mr. Reese

. . . in recognition of his years of effective coordination of practice and instruction through textbook and technical papers on reinforced concrete.

Established in 1947 by the Concrete Reinforcing Steel Institute to honor the memory of Alfred E. Lindau, past president of ACI, the award is in the form of a bronze plaque bearing a bas-relief portrait of Mr. Lindau. It is given only for outstanding contributions to reinforced concrete design practice and is not mandatory each year.

The Henry C. Turner Medal will be given to Mr. Goldbeck

. . . in recognition of more than 40 years of quiet perseverance in the extension of our knowledge of concrete for use in highways and structures.

This award, established in 1927 by the late Mr. Turner, ACI past president, is presented for notable achievements in, or service to, the concrete industry. The medal is of gold and is accompanied by an engraved certificate that recounts the medal's purpose.

Recipients of the Turner Medal are not restricted to members of the Institute nor is the award based on achievements during any particular period. The award may be made once in any year but not necessarily every year.

Continued on p. 10

Up, up goes barometer

ACI's proposed new general headquarters building in northwest Detroit becomes close to physical fact with the arrival of the new year.

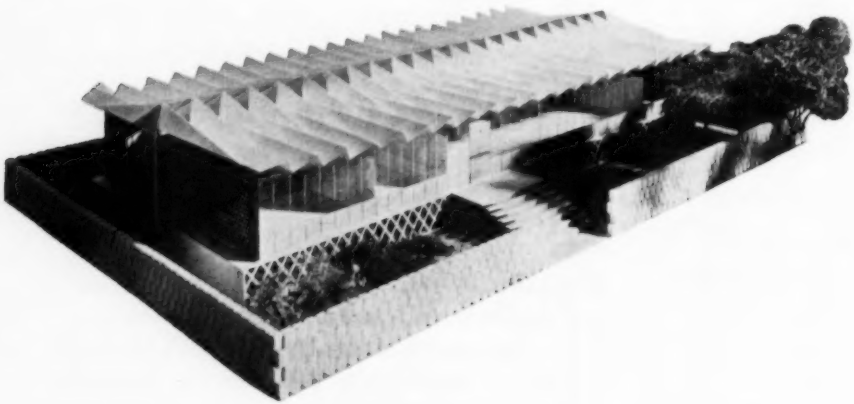
Building fund contributions, vital to erecting this permanent workshop for efficient pursuit of ACI objectives, received a healthy boost in the closing weeks of 1956.

Checks and pledges advanced the total to $93,684.93 as of December 14. This sum was attained by the generous cooperation of members and others interested in the ongoing activities of the Institute.

Henry L. Kennedy

Renewing efforts to raise the balance of the $250,000 building fund goal by voluntary gifts from members and the industry so that Institute occupancy can take place in December, 1957, is the Building Committee led by Henry L. Kennedy.

Committee members, who are intensifying a money-raising campaign so that construction work may begin March 1 as originally scheduled are:

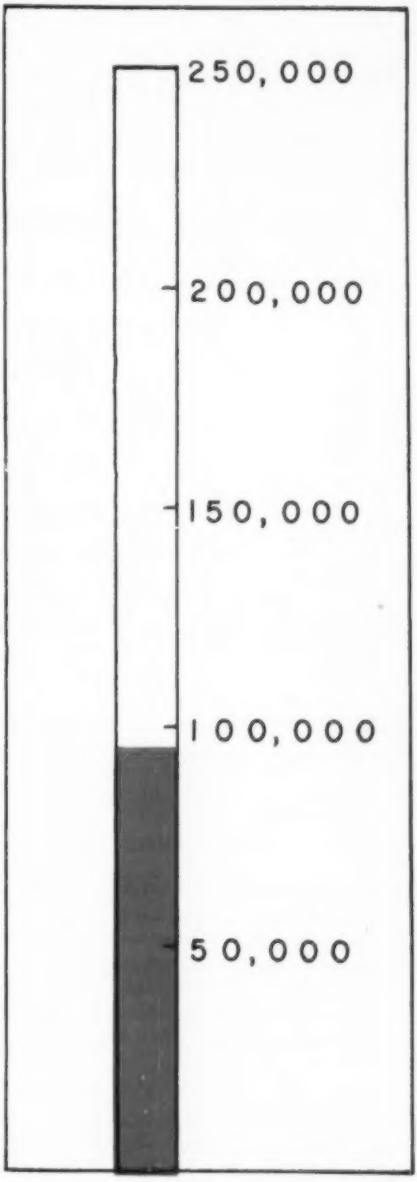


ACI's HOME—Sleek design of ACI's headquarters to be erected on property on West Seven Mile Road, Detroit, features folded plate reinforced concrete roof system cantilevered 19 ft front and rear from the monolithic concrete corridor walls. Projecting over exterior walls of decorative precast concrete panels and glass, roof shields them from summer sun and reduces air conditioning load. Building is surrounded by a wall made of precast concrete masonry units. Working space for all staff departments is provided on first floor. Ground floor will house reproduction equipment, mail room, publication storage, library, lunch room, and utilities. Architect: Minoru Yamasaki of Yamasaki, Leinweber & Associates, Royal Oak, Mich. Structural engineers: Ammann & Whitney, New York, and Milwaukee

— *next comes building!*

A. Allan Bates, vice-president for research and development, Portland Cement Association; Robert F. Blanks, vice-president and general manager, Great Western Aggregates, Inc.; Roger H. Corbetta, president, Corbetta Construction Co., Inc.; Raymond E. Davis, consulting engineer, professor emeritus, University of California; Harry C. Delzell, managing director, Concrete Reinforcing Steel Institute; Jay E. Jellick, manager, Portland Cement Information Bureau; Frank Kerekes, dean of faculty, Michigan College of Mining and Technology; William A. Maples, secretary-treasurer, American Concrete Institute; Douglas McHenry, director of development, Portland Cement Association; Walter H. Price, chief, engineering laboratories, U. S. Bureau of Reclamation; Charles H. Scholer, professor of applied me-

Continued on p. 30



Status of Building Fund Through Dec. 14, 1956 (including pledges in hand)

Reinforcing steel industry	$40,000.00
Consulting engineers and architects	26,726.00
Cement manufacturers	13,250.00
Admixture manufacturers	6,158.93
Contractors	5,265.00
Special contributions	1,000.00
Concrete products manufacturers	500.00
Concrete machinery and specialty products	485.00
Membership at large	300.00
Total	$93,684.03

REVISIONS to important Institute standards will be first on the docket when ACI members assemble in Dallas February 25-28 for their 53rd annual convention.

The tentative program planned will be of value to designer, builder, research man, and to those with specialized interests in the concrete field.

Busy completing local arrangements for the convention to be held at the Statler Hilton Hotel is Cedric Willson, chairman, and his committee. Room reservations for the 3-day program should be made directly to the hotel, it was announced.

1957 Convention Calendar:

1957

TENTATIVE CONVENTION PROGRAM

FEBRUARY 25

TECHNICAL COMMITTEE DAY

FEBRUARY 26

FIRST GENERAL SESSION, 10 A.M.

FRANK KEREKES, CHAIRMAN

Proposed Standards

Committee 214—Evaluation of Test Results of Compression Tests of Field Concrete
Committee 315—Detailing Manual

Committee Reports

Committee 605—Hot Weather Concreting
Committee 616—Coatings for Concrete

PRESTRESSED CONCRETE, P.M.

THOR GERMUNDSSON, CHAIRMAN

Progress Report of ACI-ASCE Committee 323

Historical Background—E. L. Erickson
Introduction to the Report—C. P. Siess
General Aspects of Design, Chapter II—M. J. Holley, Jr.
Details of Design, Chapter II—W. B. Bennett
Materials, Chapter III—Howard Simpson
Construction, Chapter IV—Curzon Dobell

EVENING—MOTION PICTURES

Action of Beam to Column Connections—G. C. Ernst, University of Nebraska
Inside Story of Concrete—Corps of Engineers
Lightweight Concrete Building—Texas Industries, Inc.

Continued on p. 15

DALLAS LANDMARK—ACI convention-goers will see unique Meadows building in Dallas, designed with red, blue, and yellow crushed marble roof surface to make it visible from air as well as the ground. Note "lone star" emblem on roof of reinforced concrete framed building

Data on Dallas

"BIG D" in Texas means Dallas.

This bustling city, located on the Trinity River in northeast Texas, easily lives up to its reputation of being the "sophisticate of the Southwest."

Oil, cattle, and cotton barons call it "home."

Skyscrapers soar above the one-room log cabin set on the bank of the Trinity River that was Dallas' first house when John Neely Bryan founded the city more than a hundred years ago.

The first settlement, established in 1841, was called "Peter's Colony." The name was later changed to Dallas (pronounced DAHL ahs) in honor of George Mifflin Dallas, vice-president in the administration of James K. Polk. Dallas was incorporated as a city in 1856. It adopted the council-manager plan of government in 1931.

One of the most recent and elegant new structures is that of the 21-story, Y-shaped Statler Hilton Hotel, chosen as headquarters for ACI's convention in this historic city.

Dallas is home base for several major oil firms, hundreds of independent oil operators, and large oil-field equipment and supply companies. It manufactures large quantities of cotton goods and cottonseed oil products. It ranks as the nation's leading export cotton market.

Other important enterprises in Dallas are harness making and saddlery shops, flour mills, cement plants, iron and metal works, packing houses, and grain elevators.

Dallas is also the site of a naval air-training station, and of an army air base. It does great wholesale and retail business and is the fashion center of the Southwest.

Nieman-Marcus, Inc., of Dallas is an international by-word to the fashion conscious.

Aviation development has been stimulated by good flying weather, concentration of business and buying power, and strategic geographic location.

The three municipal airports are Love Field, center for commercial routes; Red Bird Airport, freight and private flying field; and Hensley Field, under long-term lease to the Navy.

Fifty legal reserve life insurance companies have headquarters here, making it the nation's third largest insurance center.

Visitors can play golf, fish, swim or boat, tramp the midway of the tremendous State Fair of Texas, watch Cotton Bowl football in season, drive in for a barbecue plate under the stars, see a rodeo, or join in a square dance—all within city limits.

Altitude of Dallas is 512 ft above sea level. The city's population of 532,000 is spread over 169 sq miles.

FREEWAY CURBING—Specially designed forms for curbing and parapet walls, made by Blaw-Knox Co., with screw jack and lap plate adjustments for vertical curvature and super-elevation, were used on the new multi-million dollar San Francisco Freeway system. The "curve" is actually a series of straight 5-ft sections. Contractors for this part of freeway, which links the James Lick Memorial Freeway with the projected Embarcadero Freeway in San Francisco, are MacDonald, Young & Nelson, Inc., and the Morrison-Knudsen Company, Inc.

On the job

CONCRETE

CONCRETE construction history was made in 1956. New design ideas embodied prestressed and precast features. Bridges, hangars, and highways reflected topnotch engineering skill and applied research. Outlook for the entire 1957 construction industry is even better, according to the U. S. Departments of Commerce and Labor. Outlays are expected to total almost $46.5 billion, about 5 percent above the record volume of more than $44 billion for 1956.

HANGAR INNOVATION—Airplane hangar built for the Sarasota County Mosquito Control Commission at Sarasota, Fla., features use of Leap prestressed concrete double tees, supported by cantilever prestressed concrete girder. Accommodating four airplanes, hangar is 40 x 320 ft. Architect: Jack West of Sarasota; Contractor: T. T. Watson, Inc. Leap prestressed concrete double tees by West Coast Shell Corp., Sarasota, Fla.

TODAY

CELLULAR DAM—Cellular type dam, completed in less than a month and a half, for American Viscose Corp.'s plant at Parkersburg, W. Va., uses interlocking steel sheet pile cylinders filled with lean concrete and capped with an erosion-resistant, 18-in. cover of a richer, high-strength concrete mixture. More than 6100 cu yd of concrete and 289 tons of steel sheet piling were used. Seven cells, each 29 ft in diameter, have six intermediate connecting arcs. Dravo Corp., Pittsburgh, installed the new dam structure on the Little Kanawha River

CEMENT STATION—New cement distributing station has been placed in operation in the Seattle area to take advantage of water transportation rates from Bellingham, Wash., 95 miles from Seattle. At Harbor Island, Olympic Portland Cement Co. erected four 10,000-bbl storage silos, truck-loading facilities, bag storage, and a packer building. Cement is transported from the Bellingham plant to Harbor Island via barge, a LSM converted ship, 220 ft long, and having a capacity of 6500 bbl.

When the barge arrives at the distributing station, it is unloaded by a Type D Fuller-Kinyon remote-control unloader. Unloading system pumps cement up and into silos

1957 Awards

Continued from p. 8

Messrs. Tuthill and Cordon have been selected to receive the Wason Medal for the "most meritorious paper" of the year, "Properties and Uses of Initially Retarded Concrete," which appeared in the November, 1955, ACI JOURNAL.

Messrs. Lauer and Slate will receive the Wason Medal for "noteworthy research" reported in "Autogenous Healing of Cement Paste," which appeared in the June, 1956, ACI JOURNAL.

The Wason Medal, established in 1917 by Leonard C. Wason, ACI past president, consists of a bronze medal and certificate presented to each awardee. One award is given for the "most meritorious paper" published in the latest volume of the *Proceedings* of the American Concrete Institute. The research award is given for original research work on a subject relevent to Institute activity and which, within the year, has been the subject of an Institute paper.

Roy R. Clark is to be presented the Construction Practice Award for his paper, "Bonneville Dam Stilling Basin Repaired After 17 Years' Service," which appeared in the April, 1956, ACI JOURNAL.

This award was established in 1944 by the Institute to recognize the man on the job for his resourcefulness in translating design into the completed structure.

Albert T. Goldbeck—Turner Medalist

Albert T. Goldbeck, a former ACI president, retired in 1956 as engineering director of the National Crushed Stone Association, Washington, D. C. He continues as engineering consultant for the association.

Mr. Goldbeck was graduated from the University of Pennsylvania with a BS in civil engineering in 1906, and received the degree of CE in 1923. Following graduation he served as instructor at his alma mater for 2 years and at Lafayette College for 2 years before entering upon his lifetime research career.

He joined the staff of the Office of Public Roads in 1910; he became assistant engineer in charge of the Philadelphia Municipal Laboratory in 1913, and rejoined the reorganized laboratory of the Bureau of Public Roads and Rural Engineering in 1915. He served the bureau successively as engineer of tests and chief of the division of tests.

Albert T. Goldbeck

The Goldbeck soil pressure cell is a well known instrument developed in this period.

Since 1925 Mr. Goldbeck has been with the National Crushed Stone Association. During the past 40 years he has been active and prominent in a number of technical organizations. In 1951 the Highway Research Board of the National Research Council presented him with the organization's Distinguished Service Award.

Active in ACI since 1926, Mr. Goldbeck has authored eight papers for the JOURNAL and has served on numerous committees. He is presently a member of Committee 325, Structural Design of Concrete Pavements for Highways and Airports; Committee 613, Recommended Practice for Proportioning Concrete Mixes; and Committee 617, Specifications and Recommended Practice for Concrete Pavements and Bases.

He was the first recipient of the Frank E. Richart Award of the American Society for Testing Materials for "notable contributions to better highways and structures through sustained, painstaking research and standardization in materials."

Raymond C. Reese—Lindau Award

Raymond C. Reese, consulting engineer, Toledo, Ohio, has been an authoritative author in the field of reinforced concrete for many years.

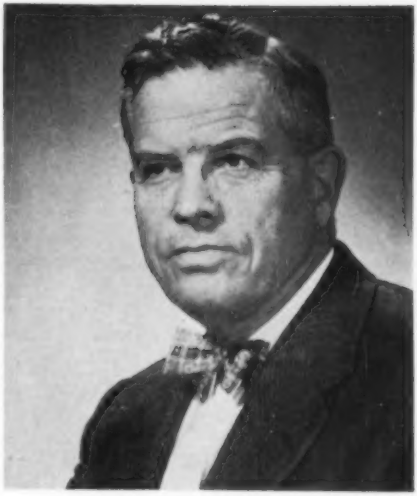
Six of his papers have appeared in the JOURNAL; he is author of the *CRSI Design Handbook* published in 1951.

For 8 years, Mr. Reese has been chairman of ACI Committee 315, Detailing of Reinforced Concrete Structures. Now serving on the Standards Committee, he is also a member of the following technical committees: 318, Standard Building Code; 326, Shear and Diagonal Tension; and 327, Ultimate Load Design.

Educated in engineering at Massachusetts Institute of Technology and Pierce Hall, Harvard, he spent several years as an industrial engineer with the General Electric Co. Since 1922 he has been in private practice as a consulting engineer; he has also been a consultant for the Hausman Steel Co. for 30 years.

Mr. Reese has lectured in structural subjects at the University of Toledo and designed a number of rigid frame structures; he is considered a specialist in grain elevators and storage bins.

He received the 1953 Award of the Concrete Reinforcing Steel Institute for "his contributions to reinforced concrete construction through design."



Raymond C. Reese

Lewis H. Tuthill and William A. Cordon—Wason Medalists

Lewis H. Tuthill, who has been an ACI member since 1926, recently assumed new duties as concrete engineer of the California State Department of Water Resources, Division of Design and Construction, Sacramento.

Since 1939, he had been a concrete engineer for the Bureau of Reclamation in Denver and assisted in editing the bureau's *Concrete Manual*.

Mr. Tuthill was graduated from Oregon State College with a BS degree in engineering in 1920. Since then he has been continuously engaged in design and construction work on irrigation, water supply projects, and the building of dams, with the technique and control of concrete as his primary and absorbing interest.

His first employment was with the Grant's Pass Irrigation District in Oregon; next the Merced Irrigation District in California, where he was associated with the control of concrete on Exchequer Dam; and following this, the same detail on Malones Dam for the Oakdale and South San Joaquin Irrigation District. After a year of private consulting practice, concrete control work on Pardie and Hogan Dams for the East Bay Municipal District and City of Stockton, Calif., next occupied his attention. During 7 years with the Metropolitan Water District of Southern California, he prepared specifications for 4½ million cu yd of concrete work and materials, passed upon the acceptance of cement and various materials for the immense aqueduct from the Colorado River to the Los Angeles area, and prepared a manual of inspection.

Mr. Tuthill is a member of the Institute's Board of Direction, the Technical Activities Committee, and heads Committee 604, Winter Concreting Methods, and Committee 614, Recommended Practice in Measuring, Mixing, and Placing Concrete. He is also a member of the following technical committees: 213, Properties of Lightweight Aggregates and Lightweight Aggregate Concrete;

605, Hot Weather Concreting; 609, Compaction of Concrete by Mechanical Means; and 621, Aggregates.

He has prepared or collaborated on at least 14 papers for the JOURNAL. He was awarded the ACI Construction Practice Award in 1945 for his paper, "Concrete Operations in the Concrete Ship Program," based upon his 2 years' supervision of the concrete quality for the U. S. Maritime Commission's concrete ship construction program.

William A. Cordon recently resigned as research engineer for the Portland Cement Association and joined the civil engineering faculty, Utah State Agricultural College, Logan. He is in charge of the materials laboratory.

Since graduation in 1935 from Utah State Agricultural College in civil engineering, Mr. Cordon has worked on dams and water control works. He has been employed as a concrete engineer and earthwork inspector on Island Park Dam, Crosscut Canal and Diversion Dam, Idaho. He spent 2½ years as construction inspector at Grand Coulee Dam, Washington. Mr. Cordon worked 14 years with the U. S. Bureau of Reclamation in Denver before joining the Portland Cement Association in Chicago as research engineer in 1955.

A member of ACI since 1937, he is chairman of ACI Committee 613, Recommended Practice for Proportioning Concrete Mixes, and also heads Committee 214, Evaluation of Results of Compression Tests of Field Concrete.

Kenneth R. Lauer and Floyd O. Slate—Wason Medalists

Kenneth R. Lauer, assistant professor of civil engineering, Montana State College, Bozeman, joined ACI in 1948.

He received his BS in civil engineering from the University of Alberta in 1947 and his MS degree there the next year.

Professor Lauer took further graduate work at Cornell University, receiving his master's degree in 1952.

His previous position was materials engineer, Thompson and Lichtner Co., Boston, Mass. He is affiliated also with ASTM, RILEM, and Sigma Xi.

Floyd O. Slate, associate professor of engineering materials at Cornell University, Ithaca, N. Y., has been an Institute member since 1952.

He was assistant professor of civil engineering and chief chemist of the Joint Highway Research Project, Purdue University, before assuming his present duties. Earlier he worked on the Manhattan project.

For 9 months in 1956 he worked temporarily for the U. S. government, International Cooperation Administration, as housing research advisor, Karachi, Pakistan, where problems in concrete were being encountered.

Dr. Slate received his PhD with major study in chemistry from Purdue University.

Roy R. Clark—Construction Practice Award

Roy R. Clark, presently special assistant to the district engineer, Portland district, U. S. Army, Corps of Engineers, headed the design branch of the district for 18 years. He graduated from Oregon State College in mining engineering in 1909. He completed civil and structural engineering training at Cornell University and received the professional degree of civil engineer in 1938 from Oregon State College.

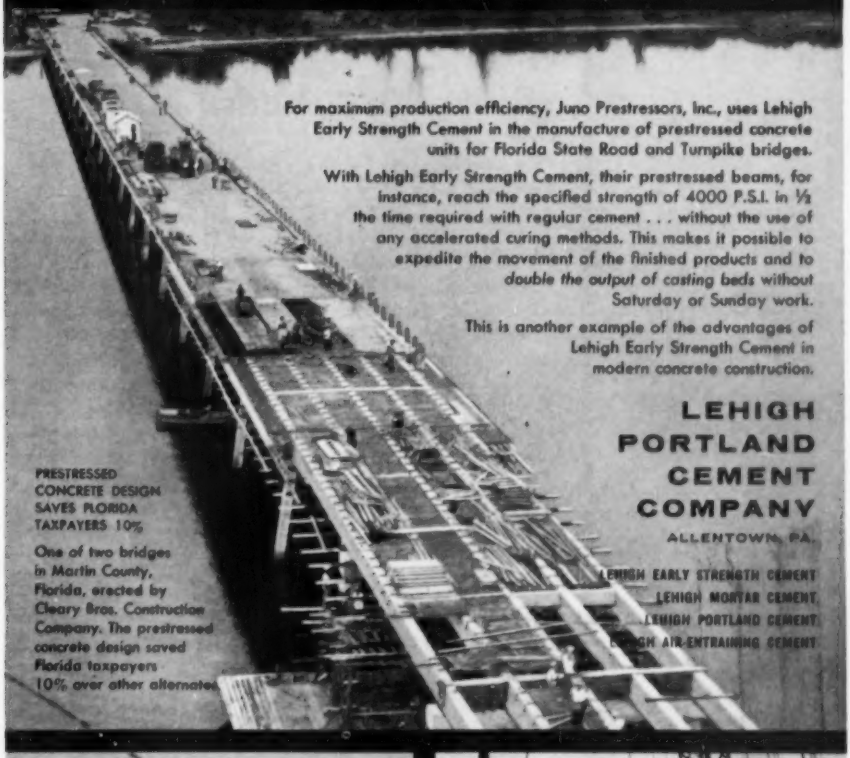
For 4 years he was employed by contracting firms engaged in building and bridge work. He specialized in concrete and steel construction during 18 years of private practice as a civil and structural engineer.

Mr. Clark has been employed by the Corps of Engineers as designing engineer on dams and related hydraulic structures for 21 years. Projects with which he has been associated in this capacity include Bonneville, Fern Ridge, Cottage Grove, Dorena, Detroit, McNary, and Lookout Point dams.

During World War I he was in France in 1917 as engineer for the YMCA. Later he was made chief engineer for this organization.

Mr. Clark has been an ACI member since 1937 and is a member of ACI Committee 210, Resistance to Erosion in Hydraulic Structures. In addition to being a registered engineer in Oregon and California, he is a member of Tau Beta Pi, ASCE, Society of American Military Engineers, and Society of Professional Engineers of Oregon.

LEHIGH EARLY STRENGTH CEMENT
speeds production of prestressed bridge units



For maximum production efficiency, Juno Prestressors, Inc., uses Lehigh Early Strength Cement in the manufacture of prestressed concrete units for Florida State Road and Turnpike bridges.

With Lehigh Early Strength Cement, their prestressed beams, for instance, reach the specified strength of 4000 P.S.I. in ½ the time required with regular cement . . . without the use of any accelerated curing methods. This makes it possible to expedite the movement of the finished products and to *double the output* of casting beds without Saturday or Sunday work.

This is another example of the advantages of Lehigh Early Strength Cement in modern concrete construction.

LEHIGH PORTLAND CEMENT COMPANY
ALLENTOWN, PA.

LEHIGH EARLY STRENGTH CEMENT
LEHIGH MORTAR CEMENT
LEHIGH PORTLAND CEMENT
LEHIGH AIR-ENTRAINING CEMENT

PRESTRESSED CONCRETE DESIGN SAVES FLORIDA TAXPAYERS 10%

One of two bridges in Martin County, Florida, erected by Cleary Bros. Construction Company. The prestressed concrete design saved Florida taxpayers 10% over other alternates.

Casting yard of Juno Prestressors, Inc., a subsidiary of Cleary Brothers Construction Company, West Palm Beach, Florida. Ready mixed concrete supplied by Rinker-Riviera Company, Riviera Beach, Florida.

Pretensioned beam being placed. Beams are 47' 3" long, 3' deep. They measure 12" at the top, 18" at the bottom. Web is 6" thick. Piling is 20"x20". Both beams and piles were made with Lehigh Early Strength Cement.

low cost R/C DUCT FLOORS
(ELECTRIFIED CONCRETE JOIST FLOORS)

provide 100% electrical flexibility

for the tenants of the handsome, new reinforced concrete building of E. I. du Pont de Nemours and Company

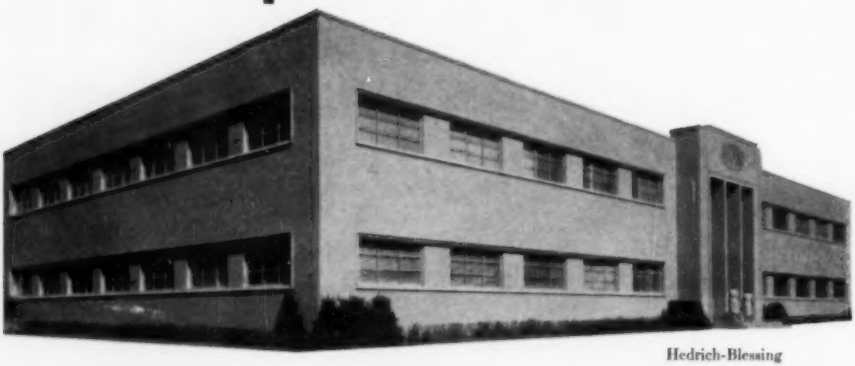
Owner:
E. I. du Pont
de Nemours and Co.

*Location:
7250 North Cicero Ave.
Lincolnwood, Illinois
(Suburb of Chicago)

Architect Engineer:
Ralph Stoetzel
Chicago, Illinois

Contractor:
Joseph T. Carp, Inc.
Chicago, Illinois

R/C Duct Floors (electrified concrete joist floors) provide the management and personnel of the new E. I. du Pont de Nemours and Company (Finishes Division)* with a *complete* network of underfloor electrical outlets for power, light, telephone, and intercom systems—at a new low cost. Additional outlets can be connected to convenient risers in minutes. There is no ripping up or drilling through floors and ducts. R/C Duct Floors, which meet all building code requirements, consist of *standard* steel electrical distribution ducts set in the *structural* slab of reinforced concrete joist floors . . . no expensive fill or topping is needed. Cost studies show that R/C Duct Floors average 19% less than cellular steel floors. Furthermore, reinforced concrete buildings start quicker and are completed sooner.



Hedrich-Blessing

Write for new 16-page bulletin

CONCRETE REINFORCING STEEL INSTITUTE
38 South Dearborn Street • Chicago 3, Illinois

1957 Convention Program

Continued from p. 6

FEBRUARY 27

CONSTRUCTION SESSION, A.M.

WALTER H. PRICE, CHAIRMAN

Design Criteria for Modern Concrete Specifications and Control—Lewis H. Tuthill, California State Department of Water Resources, formerly U. S. Bureau of Reclamation; Edward A. Abdun-Nur, Consulting Engineer

Concreting the Dallas Memorial Auditorium—Jack E. Rosenlund; George L. Dahl, Architects and Engineers

Concrete for Sewage Works—E. C. Wenger, Portland Cement Association

Prestressed Concrete Hangar—David P. Billington, Roberts and Schaefer Co.

DESIGN SESSION, P.M.

DOUGLAS McHENRY, CHAIRMAN

Apartment Building in Dallas, Texas—Frank W. Chappell, Consulting Engineer

Blast Resistant Design of Farmers Union Building—S. Arthur Axtens, Consulting Engineer

Strength of Slender Reinforced Concrete Columns—Ivan M. Viest, University of Illinois; and Bengt Broms, Shell Development Co.

MATERIALS SESSION, P.M.

A. ALLAN BATES, CHAIRMAN

Portland Slag Cement—Bryant Mather, Waterways Experiment Station

Fly Ash Concrete—R. H. Breckenridge, Texas Power and Light Co.

Study of Concrete Pipe in Service—W. J. McCoy, Lehigh Portland Cement Co.; R. J. Sweitzer, Lock Joint Pipe Co.; and Martin E. Flentje, American Waterworks Service Co.

Effect of Temperature on Concrete Strength—Paul Klieger, Portland Cement Association

FEBRUARY 28

RESEARCH SESSION, A.M.

S. J. CHAMBERLIN, CHAIRMAN

Program to be presented by Committee 115, Research

LIGHTWEIGHT AGGREGATE SESSION, P.M.

CEDRIC WILLSON, CHAIRMAN

High-Pressure Steam Curing of Lightweight Aggregate Concrete—Rudolph C. Valore Jr., Texas Industries, Inc.

Lightweight Aggregate Concrete for Structural Applications—J. J. Shideler, Portland Cement Association

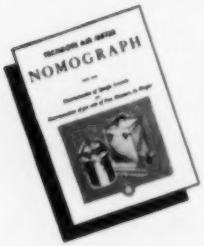
Lightweight Expanded Shale Aggregate and Its Use in Structures—R. A. McCann, Basalt Rock Co.

Design and Control of Lightweight Aggregate Concrete—H. K. Stephenson and Truman R. Jones, Texas A & M College

TECHKOTE AIR METER..

FIRST CHOICE AROUND THE WORLD

The Techkote Air Meter now provides a multi-range testing instrument that vastly increases the usefulness of the air meter. It is now possible to measure accurately—within a fraction of a degree—entrained air with one instrument on numerous materials such as lightweight concrete, mortar, plaster and soil, in addition to regular concrete.



This outstanding new Multi-Range feature, together with the Nomograph and many other exclusives of the Techkote Air Meter, offers a combination unequalled in this type of equipment. TO BE SURE...USE THE FINEST!

TECHKOTE COMPANY

INCORPORATED

600 Lairport Street, El Segundo, California

Positions and Projects

ACI participates in concrete conference; 200 attend program at University of Minnesota

Two hundred architects, engineers, contractors, and others in the building trades attended the sixth annual Concrete Conference conducted by the University of Minnesota at its Center for Continuation Study, November 26-27.

ACI Technical Director Paul F. Rice represented the Institute and participated in a program on ready-mixed concrete. Floors, finishing, placing, and curing were covered in the presentation.

George W. Washa, member of the ACI Board of Direction, addressed the group on the fundamentals of lightweight concrete.

Committee 616 title changed; scope expanded

Change of title for Committee 616 to "Coatings for Concrete" has been approved by the Institute Board of Direction. The committee's mission has been extended to include industrial applications of coatings for concrete to prevent deterioration of concrete, and dampproofing and waterproofing. Organized in 1936, Committee 616, originally studied paints for concrete surfaces, and developed the "Recommended Practice for the Application of Portland Cement Paint to Concrete Surfaces (ACI 616-49)" which was adopted as an ACI Standard in 1949.

G. E. Burnett, U. S. Bureau of Reclamation, is chairman of Committee 616.

New members of ACI technical committees

Committee 208, Bond Stress

Phil M. Ferguson, University of Texas, Austin, and C. A. Willson, American Iron and Steel Institute, New York, have accepted appointment to this committee.

Committee 209, Volume Changes and Plastic Flow in Concrete

New committee member is J. Neils Thompson, University of Texas, Austin.

Committee 214, Evaluation of Results of Compression Tests of Field Concrete

Recently added as committee members are T. F. Willis, Missouri State Highway Department, Jefferson City, and Edward A. Abdun-Nur, consulting engineer, Denver.

Committee 312, Plain and Reinforced Concrete Arches

E. L. Erickson, Bureau of Public Roads, Washington, D. C.; J. P. Michalos, New York University, New York; Emerson Ruble, Association of American Railroads, Chicago; and J. C. Rundlett, Massachusetts State Highway Department, Boston, have accepted committee appointments.

Committee 611, Inspection of Concrete

Edward A. Abdun-Nur, consulting engineer, Denver, has accepted committee membership.

Committee 616, Coatings for Concrete

Francis Scofield, Technical Division of National Paint, Varnish and Lacquer Association, Washington, D. C., is a new member of the committee.

Committee 622, Formwork for Concrete

H. P. Cerutti, Steel Forms Department, Blaw-Knox Equipment Division, Pittsburgh, Pa., and A. H. Piling, Richmond Screw Anchor Co., Inc., Brooklyn, N. Y., have accepted appointment to the committee.

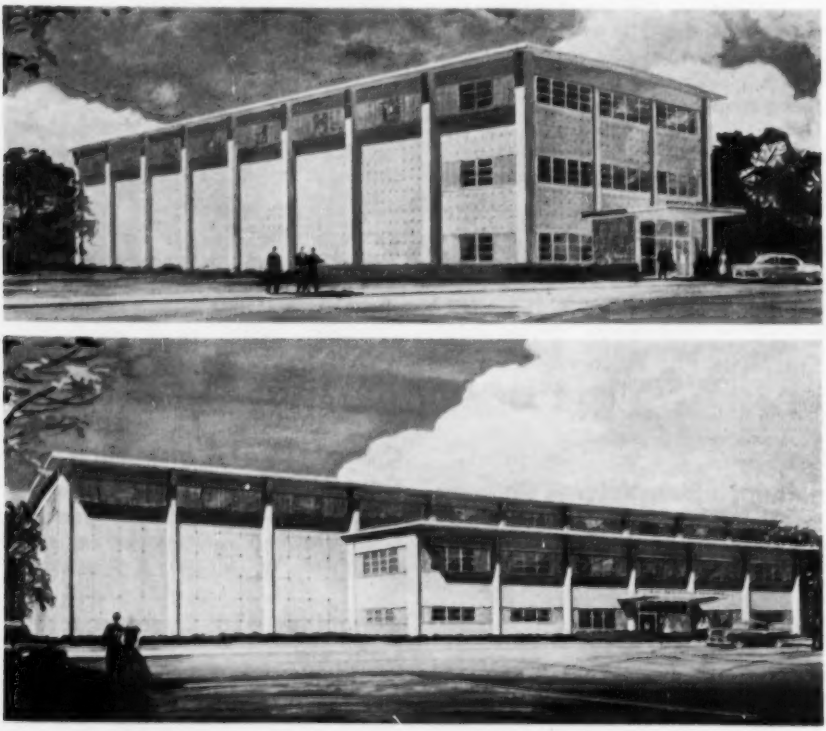
Goodkind receives engineering award

Morris Goodkind, consulting engineer, Bloomfield, N. J., and former director and chief bridge engineer of the New Jersey State Highway department, was honored with the 1956 Engineering Award by the New Jersey Society of Professional Engineers. The award was for outstanding achievements in bridge design and contributions to the advancement of the engineering profession.

Dewey and Almy expanding

Expected to be in operation by February is the new half-million dollar pilot laboratory under construction for the Dewey and Almy Chemical Co., division of W. R. Grace and Co., Cambridge, Mass.

The new laboratory will quadruple the present area for piloting operations of the company. It will house equipment and facilities for storage, distillation, and purification of monomers as well as coagulation and drying facilities.



ARTIST'S DRAWINGS of two new buildings planned for construction at Portland Cement Association Research and Development Laboratories, Skokie, Ill., feature tilt-up wall construction with decorative designs cast into the concrete wall panels.

Fire Research Center (bottom) will be 56 x 220 ft with a two-story 24 x 132 ft wing on one side.

Structural Development Laboratory (top) will be 56 x 176 ft.

The new structures, estimated to cost about $2,750,000, including paving, landscaping, and equipment, are scheduled for completion late in 1957.

The buildings, to be constructed by George A. Fuller Co. of Chicago, will provide for the association's expanded research and development program on concrete structures and the fire resistance of concrete.

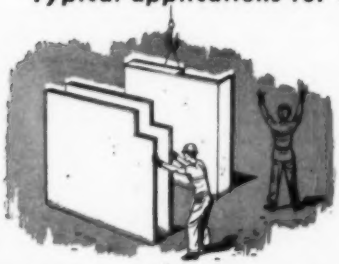
The Structural Development Laboratory or "giant testing machine" will be a part of the development department headed by Douglas McHenry, director. The Fire Research Center will be organized under the research department where Hubert Woods is director.

CLINTON WELDED WIRE FABRIC

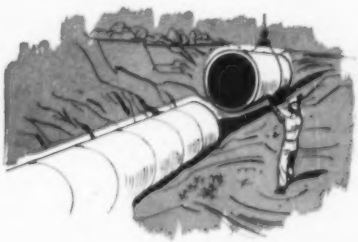
. . . the concrete reinforcement that is low in cost and so easy to use

Versatile Clinton Welded Wire Fabric is ideal for so many different concrete reinforcement jobs. It can be quickly laid because it comes in conveniently-sized rolls or sheets and can be easily cut to shape without heavy, special equipment.

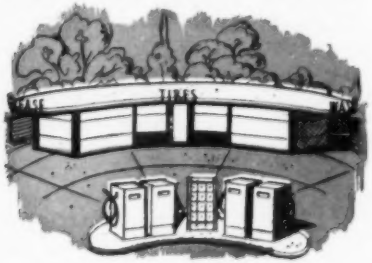
Typical applications for Clinton Welded Wire Fabric are:



PRECAST REINFORCED PRODUCTS. Clinton Welded Wire Fabric is ideal since it's easy to handle and affords excellent strength characteristics because it's made from high-yield-strength wire.



REINFORCED PIPE. Clinton Welded Wire Fabric is excellent for concrete pipe reinforcement because it is easy to place when making the pipe . . . because it gives the pipe long life, high strength and the ability to withstand heavy, concentrated loads.



BUILDINGS. Clinton Welded Wire Fabric helps hold future maintenance costs to a minimum by controlling cracking, equalizing loads and preventing deterioration. As a result, this durable, dependable fabric is widely used in service stations, office buildings, schools, hospitals, apartments, residences and warehouses.

You can get full information on how you can use Clinton Welded Wire Fabric to best advantage in your operation by writing to the nearest office below. Do it today.

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Visit Institute offices

Recent foreign visitors to ACI offices were Kauko K. Saari of Finland, graduate student in structural engineering at the University of Michigan, and Edward E. Peacock of North Sydney, N.S.W., Australia. Mr. Saari visited local precast floor unit manufacturers. He is studying American production methods. Mr. Peacock is studying concrete construction on a world-wide trip with emphasis on sliding-form construction. Both are new ACI members.

Adds fourth autoclave in Salt Lake City plant

Buehner Block Co., Salt Lake City, Utah, has installed a new autoclave, the fourth unit in the plant.

Alaska Corps of Engineers seeks applicants

An immediate and critical need for 80 qualified engineers and inspectors has been announced by the Alaska District, Corps of Engineers, with headquarters at Elmendorf Air Force Base, Anchorage.

Nation-wide recruitment is underway to fill the following vacancies: civil, electrical, mechanical, structural, soils mechanics, materials, construction, and construction management engineers at GS-9 and GS-11 grades with salaries ranging from $6800 to $9331.25; construction, electrical, mechanical, and asphalt paving inspectors, grades GS-7 and GS-9 with salaries from $4625 to $7812.50. Salaries include 25 percent territorial cost-of-living allowance which is non-taxable for federal income tax. All positions are competitive civil service. Further details may be obtained from the District Engineer, Alaska District, Corps of Engineers, U. S. Army, Anchorage, Alaska, or from any district or division office of the Corps of Engineers in the applicant's area.

America's 13-year highway construction program gets underway

Believed to be the first heavy-duty interstate highway constructed under the Federal-Aid Highway Act of 1956 is the Kansas pavement on U. S. 40.

The act authorized nearly $25 billion in federal funds for the construction of interstate highways over the next 13 years. The highway legislation, intended to remedy serious deficiences of American highways, became effective July 1. Prior to its passage, the federal government provided 60 percent and the states 40 percent of construction funds for interstate system highways. Under the new legislation, the government pays 90 percent of construction costs.

Additional awards for the construction of highways under provisions of the act have also been made in Illinois, Maine, Michigan, Mississippi, Ohio, and Texas.

New examinations announced for engineer and physical science jobs

Applications are being accepted for engineer and physical science positions in activities of the Potomac River Naval Command in and near Washington, D. C., and in the Engineer Center, U. S. Army, Fort Belvoir, Va. Entrance salaries range from $4480 to $11,610 annually.

Interested persons should request announcement No. 73-B from the Board of U. S. Civil Service Examiners for Scientific and Technical Personnel, Potomac River Naval Command, Building 72, Naval Research Laboratory, Washington 25, D. C.

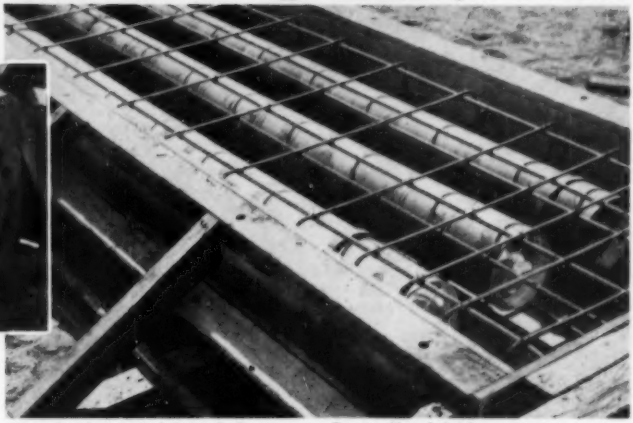
Van Rensselaer P. Saxe prepares Mondawmin structural design

Van Rensselaer P. Saxe, Baltimore, Md., served as structural engineer for the Mondawmin Shopping Center development recently completed at Baltimore. The Saxe firm was responsible for structural design of the circular staircase reported on in the November 1956 News Letter, and also supervised construction of the staircase.

SONOVOID® FIBRE TUBES

for voids in concrete construction

End view of precast hollow pile.



Form for deck-unit slab ready for concrete. Eureka Slough bridge, Eureka, Calif. Cal. Div. of Hwys., designers. Ben C. Gerwick, Inc., San Francisco, Cal., contractors.

Economical bridge design features use of **Sonovoid** *Fibre Tubes!*

Low-cost SONOVOIDS were used in both the precast, pretensioned concrete piles and deck-unit slabs for this 947-foot bridge across Eureka Slough.

This is considered to be one of the more economical bridge designs of the California Department of Highways.

The 139 piles vary in length from 45 to 105 feet, but each is 20 inches square and contains a 12 inch O.D. SONOVOID and 18 Roebling ⅜-inch, 7-strand pretensioning cables. There are 252 deck-unit slabs 30 feet long, 4 feet wide and 15 inches deep, each containing three 8-inch O.D. SONOVOIDS and 35 Roebling cables.

Low-cost SONOVOIDS eliminate the dead weight of concrete at the neutral axis . . . and save you money! Use SONOVOID Fibre Tubes in concrete bridge deck, wall, floor and roof slabs and in forming hollow piles . . . either precast units or units cast in place.

Booth 35-36 Area "AA"—American Road Builders Assn. Road Show
January 28 - February 2 • International Amphitheater, Chicago

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Named superintendent for Dragon

William T. Barron has been appointed superintendent at the Northampton, Pa., plant of Dragon Cement Co., Inc., New York. Frank J. Anderson has been named assistant plant manager; Eugene Milham, chief chemist, and Thomas J. Hynes, construction engineer.

New affiliation announced by Intrusion-Prepakt

Intrusion-Prepakt, Inc., Cleveland, has announced its affiliation with a new organization, Concrete Fabricators, Inc., with John A. Bader in charge of operations.

The new firm will manufacture, sell, and install prestressed concrete beams for bridges. Mered McKinzie will manage the plant at Crestline, Ohio.

Nordby to administer basic research grants in engineering field

Gene M. Nordby has assumed his new duties as engineer of the Program for Engineering Sciences of the National Science Foundation for the year that began Sept. 1, 1956.

He is engaged in planning and administering a national program in science and education with primary duties the administration of basic research grants in all fields of engineering.

A total of $1,140,000 is to be awarded to institutions, research organizations, and individuals for basic research in engineering in the fiscal year 1957. Several grants have been awarded for basic research in the concrete field in the past and interested researchers have been invited to write to Dr. Nordby for information. Dr. Nordby is on leave from Purdue university where he is associate professor of structural engineering.

Warren chosen PCA board chairman, eight new directors named

George E. Warren, president of Southwestern Portland Cement Co., Los Angeles, has been chosen chairman of the board of directors of the Portland Cement Association.

Eight new directors also elected by association members at their annual meeting are: W. K. Farst, general manager, Columbia Cement Division, Pittsburgh Plate Glass Co., Zanesville, Ohio; John S. Lind, general manager, St. Mary's Cement Co., Ltd., Toronto, Ont., Canada; Leonard E. Bayer, president, National Cement Co., Birmingham, Ala.; Robert E. Pflaumer, president, Standard Lime & Cement Co., Baltimore; Charles E. Shearer, president, Keystone Portland Cement Co., Philadelphia; Ben W. Calvin, president, Aetna Portland Cement, Bay City, Mich.; C. F. Lewis, president and manager, Volunteer Portland Cement Co., Knoxville, Tenn.; D. A. Symmes, president, Glens Falls Portland Cement Co., Glens Falls, N. Y.

Mr. Warren succeeds Emory M. Ford, Huron Portland Cement Co., Detroit, who has served as board chairman during the past 2 years.

Yamasaki addresses architects

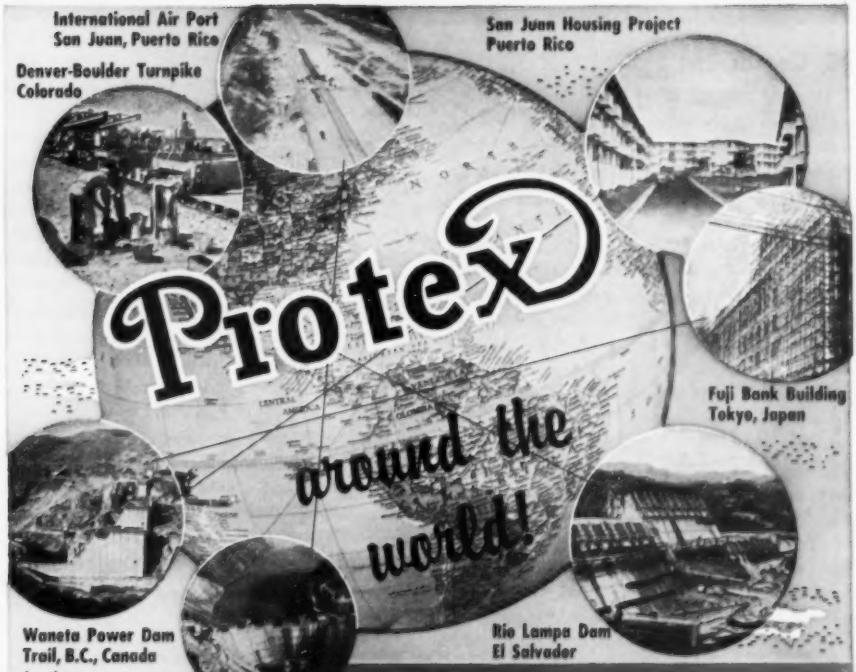
Minoru Yamasaki, of Yamasaki, Leinweber & Associates, Royal Oak, Mich., and architect for the proposed new ACI headquarters building, addressed a Detroit audience recently.

His slide-illustrated talk described eye-pleasing details in utilitarian designs being used now. Mr. Yamasaki was presented by the Friends of the Library of the University of Detroit. He told his audience that the "stark, unrelieved functionalism of most modern architecture must yield to human hunger of beauty."

Notice to contractor members of ACI

The Building Committee has decided to request bids on construction of the ACI headquarters building from a selected list of Detroit area contractors **plus** any contractors who are members of the American Concrete Institute and who wish to bid the job. A $100 deposit for plans and specifications, refundable on their return in good condition, will be required.

The date on which plans will be available is still tentative but those ACI members desiring to bid are requested to notify the ACI Secretary-Treasurer so that they may be individually contacted when a firm date has been set. Please do not send deposit until requested to do so.



Another half-million tons of Protex concrete, where climatic changes are severe and placement difficult. Protex was specified specifically for this 250' high project.

Hungry Horse Dam, Montana

Over 3 million cu. yds. of Protex concrete, selected for its consistent controlled air quality and proven economy, with no yield loss in placed concrete. Comparative tests at the project proved that, regardless of claims or names, none were as effective as PROTEX.

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Where You Find Construction, You Find PROTEX* Air Entraining Solution. And Here's Why!

Scientifically formulated and processed from controlled raw materials under exacting Laboratory control to do a positive job of controlling the entrained air in a concrete mix at a minimum cost. Our leading Industrial Organization's Research and Control facilities is producing a superior Air Entraining Agent *for all types of concrete.* That's the reason for the *big swing* to PROTEX in the millions of yards of placed concrete Around the World.

This monumental tribute in concrete stands like a beacon of positive proof that PROTEX quality and reliability—coupled with honest dealings and fair prices is what the user wants. Let your PROTEX Representative give you all the facts, and experience your savings with Superior PROTEX.

Protex membrane curing compound excels latest Government specifications U.S.E.D.—C.R.D.—300-52. Reliability—quality—reasonable price are its chief advantages.

Who's Who This Month

ACI Committee 315

"Proposed Manual of Standard Practice for Detailing Reinforced Concrete Structures," reported by ACI Committee 315, appears on p. 617 of this month's JOURNAL.

Chairman of the committee is Raymond C. Reese, consulting engineer, Toledo, Ohio. Committee members are Raymond Archibald, Bureau of Public Roads, San Francisco; Louis F. Balser, Engineering and Architectural Design Branch, Department of Navy, Washington, D. C.; Frank H. Beinhauer, J. L. Simmons Co., Inc., Decatur, Ill.; M. D. Brody, Bethlehem Steel Co., Inc., Bethlehem, Pa.; and Alvin G. Casto, Truscon Steel Co., Youngstown, Ohio.

Others on the committee are James N. De Serio, consulting engineer, Buffalo, N. Y.; Phil M. Ferguson, University of Texas, Austin; Lynn H. Hench, Department of the Army, Washington, D. C.; D. E. Hoeffel, Southern Railway System, Cincinnati; Frank Kerekes, Michigan College of Mining and Technology, Houghton, Mich.; John M. Kerr, Veterans Administration, Washington, D. C.; Charles J. Kuhn, Kuhn Construction Co., Charleston, W. Va.; and Henry L. Neve, New York. Committee roster further includes Paul W. Norton, consulting engineer, Boston; George H. Paris, Portland Cement Association, Chicago; Fred L. Plummer, Hammond Iron Works, Warren, Pa.; Allen M. Reese, U. S. Steel Corp., Whittier, Calif.; E. E. Rippstein, Laclede Steel Co., St. Louis; John F. Seifried, Ceco Steel Products Corp., Chicago; Anton Tedesko, Roberts and Schaefer Co., New York; and Howard M. Zimmerman, General Services Administration, Washington, D. C.

Boyd G. Anderson

Boyd G. Anderson, associate partner, Ammann and Whitney, New York, prepared "Rigid Frame Failures" that appears on p. 625.

Mr. Anderson previously was an engineer with Charles S. Whitney, consulting engineer. He also served as field engineer on buildings, canal locks, and piers in the designing engineer section of the Bureau of Yards and Docks, U. S. Navy, on timber, steel, concrete, and prestressed concrete aircraft hangars.

He is a 1936 civil engineering graduate of the University of Wisconsin. A member of ACI since 1945, Mr. Anderson has served on ACI Committees 312, Plain and Reinforced Concrete Arches, and 324, Precast Reinforced Concrete Structures.

His paper, "Comprehensive Numerical Method for the Analysis of Earthquake Resistant Structures," that he co-authored with Charles S. Whitney and Mario G. Salvadori received the Wason Medal for the "most meritorious paper" in 1952. In 1956 the same award was presented to Mr. Anderson, Mr. Whitney and Edward Cohen for their paper, "Design of Blast Resistant Construction for Atomic Explosions."

Richard C. Elstner and Eivind Hognestad

Richard C. Elstner and Eivind Hognestad co-authored the paper, "Laboratory Investigation of Rigid Frame Failure," that is published on p. 637.

Mr. Elstner, associate development engineer at the Research and Development Laboratory, Portland Cement Association, Chicago, has contributed frequently to JOURNAL pages.

Formerly research associate in theoretical and applied mechanics, University of Illinois, he received his BS degree in civil engineering from Rose Polytechnic Institute in 1947. After 3 years of teaching at Rose Polytechnic Institute and the University of Hawaii he began research work on various reinforced concrete projects at the University of Illinois. In 1953 he received his MS degree from the University of Illinois.

An ACI member since 1950, Mr. Elstner is also affiliated with ASCE, Sigma Xi, and Tau Beta Pi.

Dr. Hognestad, manager, structural development section, Portland Cement Association, Chicago, has been an ACI member

since 1947. He has been a member of ACI-ASCE Committees 321, Design of Reinforced Concrete Slabs; 326, Shear and Diagonal Tension; and 327, Ultimate Load Design. He also has written numerous papers for the ACI JOURNAL.

Prior to joining the PCA staff in 1953, Dr. Hognestad was research associate professor, department of theoretical and applied mechanics, University of Illinois.

He obtained his MS degree in civil engineering from the University of Illinois and the degrees of civil engineer and doctor of technical sciences from the Norwegian Institute of Technology. In 1947 he received a research appointment to the University of Illinois where he worked on various projects pertaining to concrete.

Reinhart R. Lunoe and George A. Willis

"Application of Steel Strap Reinforcement to Girders of Rigid Frames, Special AMC Warehouses," is presented jointly by Reinhart R. Lunoe and George A. Willis on p. 669.

Mr. Lunoe is chief of the design branch of the Savannah District, Corps of Engineers, Savannah, Ga. He was born in Norway and graduated in 1919 from Norway Institute of Technology in civil engineering. After 5 years with the Bureau of River Developments, Norwegian government, he came to the United States in 1924. From that year until 1935 he was associated as hydraulic and structural engineer with several engineering firms in Boston and New York.

From 1935 to 1945 he was employed as civil and structural engineer in the civil branch of the engineering division, Tennessee Valley Authority. Since January, 1956, he has been connected with the Savannah District of the Corps of Engineers, first as chief of the structural section, and since September, 1955, in his present position.

Mr. Willis is chief of the structural section, Savannah District, Corps of Engineers. In 1937 he graduated from the University of South Carolina with BS in civil engineering. Since November, 1937, he has been connected with the Corps of Engineers with the exception of one year of active duty with the U. S. Navy during World War II. He has worked successively in the Memphis District, the Vicksburg District, and the Mississippi River Commission on civil and structural design of military and civil works projects.

Since 1948 he has been with the Savannah District and since September, 1955, in his present position.

Wilhelm Eitel

Wilhelm Eitel, whose paper, "Recent Investigations of the System Lime-Alumina-Calcium Sulfate-Water and Its Importance in Building Research Problems," appears on p. 679, has been director of the Institute of Silicate Research, University of Toledo, Ohio, since 1952.

A prolific author, Dr. Eitel's most recent book was *The Physical Chemistry of the Silicates*, published by the University of Chicago Press in 1954. He has had recent articles in current periodicals, including *Zement*.

After graduating in 1909 from Woehler Realgymnasium, Frankfurt am Main, he studied for his PhD at the Universities of Tubingen and Heidelberg, Germany.

Prior to assuming his present position, Dr. Eitel was research scientist and consultant, Office of Naval Research, Norris, Tenn.

Before that, he had served for 19 years as director and founder of Kaiser Wilhelm Institute for Silicate Research, Berlin-Dahlem, until 1945. During this period he also was professor, Technische Hochschule, Berlin-Charlottenburg. Previously he had served as professor of mineralogy and petrography, University of Konigsberg, East Prussia, and professor of physico-chemical mineralogy, University of Leipzig.

Dr. Eitel is an associate member of various engineering societies and research organizations in America and Europe. He served on committees for German construction of large dams and of the Reichsautobahnen. He is now a member of the Highway Research Board, project committee B-6.

Sven Thaulow

"Tensile Splitting Test and High Strength Concrete Test Cylinders," that appears on p. 699, is the work of Sven Thaulow. He has been president of the Norsk Cementforening, Oslo, Norway, since July, 1955.

Mr. Thaulow graduated as a civil engineer in 1928 from Norwegian Technical University

in Trondheim. He worked as a consulting engineer in Rio de Janeiro, Brazil, for 3 years and also spent 3 years in consulting and construction practice in Norway.

For 12 years he was construction engineer for Oslo Harbor and for 9 years, chief construction engineer for Christiania Portland Cementfabrik, Slemmestad, Norway.

Last year he visited the United States to study American concrete practice.

Since 1938 he has been consulting engineer for the Norwegian Swimming Association and author of several technical papers and three books. One of these, *Field Testing of Concrete*, written in Norwegian, has an English abridged version.

LOOKING AHEAD

January 7-11, 1957—Highway Research Board, Annual Meeting, Sheraton-Park Hotel, Washington, D. C.

January 15-17, 1957—National Crushed Stone Association, 40th Annual Convention, American Hotel, Miami Beach, Florida

January 23, 1957—National Crushed Limestone Institute, Annual Convention, Statler Hotel, Washington, D. C.

January 27-30, 1957—Associated Equipment Distributors, 38th Annual Meeting, Conrad Hilton Hotel, Chicago, Ill.

January 28-31, 1957—Plant Maintenance and Engineering Show, Public Auditorium, Cleveland, Ohio

January 28-February 2, 1957—American Road Builders' Association, Road Show and 55th Annual Convention, International Amphitheater, Chicago, Ill.

February 11-14, 1957—National Sand and Gravel Association, 41st Annual Convention, Statler Hotel, Los Angeles, Calif.

February 11-14, 1957—National Ready Mixed Concrete Association, 27th Annual Convention, Statler Hotel, Los Angeles, Calif.

February 25-28, 1957—American Concrete Institute, 53rd Annual Convention, Statler Hilton Hotel, Dallas, Texas

February 25-28, 1957—National Concrete Masonry Association, 37th Annual Convention and Concrete Industries Exposition, Kiel Auditorium, St. Louis, Mo.

March 5-9, 1957—American Concrete Pipe Association, 48th Annual Convention, Shoreham Hotel, Washington, D. C.

March 11-14, 1957—Associated General Contractors of America, Annual Meeting, Statler Hotel, Washington, D. C.

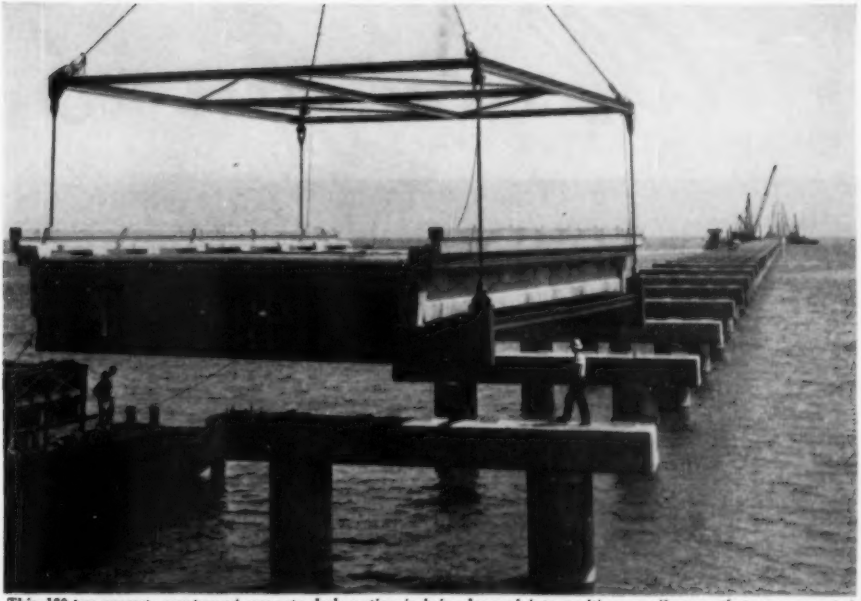
March 14-16, 1957—Third Military-Industrial Conference, Conrad Hilton Hotel, Chicago, Ill.

May 20-21, 1957—37th Annual Meeting, Society of American Military Engineers, Washington, D. C.

June 16-21, 1957—60th Annual Meeting, American Society for Testing Materials, Chalfonte-Haddon Hall, Atlantic City, N. J.

August 12-24, 1957—International Society of Soil Mechanics and Foundation Engineering, London, England

August 19-30, 1957—(Tentative) Seventh Pan American Highway Congress, Panama City, Panama



This 180-ton precast, prestressed concrete deck section is being lowered into position on pile caps that are supported on hollow 54" prestressed piles. There are 2,235 of these deck spans on the 24 mile causeway across Lake Pontchartrain near New Orleans.

Why They Used Plastiment in the World's Longest Highway Bridge...

Efficient single unit beam-and-deck design and economical mass production are outstanding features of this 24 mile causeway across Lake Pontchartrain. Each day eight 56 foot deck-spans are cast in a single bed containing pretensioned wires.

Plastiment Concrete Densifier is being used for these reasons:

UNIFORM HIGH QUALITY YEAR AROUND — During cooler weather the minimum quantity of Plastiment is used for highest structural quality. More Plastiment is added in the hot summer to keep water content and setting time of concrete constant. Cracking and crazing are entirely eliminated.

HIGH EARLY STRENGTH FOR PRESTRESSING — Initial retardation allows time for placement and consolidation of the entire unit (89 cubic yards) even in the hottest weather. After this retardation, Plastiment concrete gains strength rapidly. Steam curing for 15 hours accelerates this gain. At three days, strength averages well above 4000 psi.

ECONOMY — An economical 6½ bag concrete mix, with varying proportions of Plastiment, results in uniform high structural quality well above specifications. Ease of placement and compaction, a characteristic of low slump Plastiment concrete, reduces placing costs.

Engineers: Palmer and Baker, Inc.
Mobile, Alabama

Contractor: Louisiana Bridge Company —
A joint venture:
Brown & Root, Inc. — Houston, Texas
T. L. James Co., Inc. — Ruston, Louisiana

Write today for information on producing uniform concrete at all temperatures.

Sika **PLASTIMENT.**
CONCRETE DENSIFIER
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DISTRICT OFFICES: Boston • Chicago • Dallas • Philadelphia Pittsburgh • Salt Lake City • Washington, D. C. • Montreal, Vancouver, Canada • Panama City, Panama • Dealers in Principal Cities

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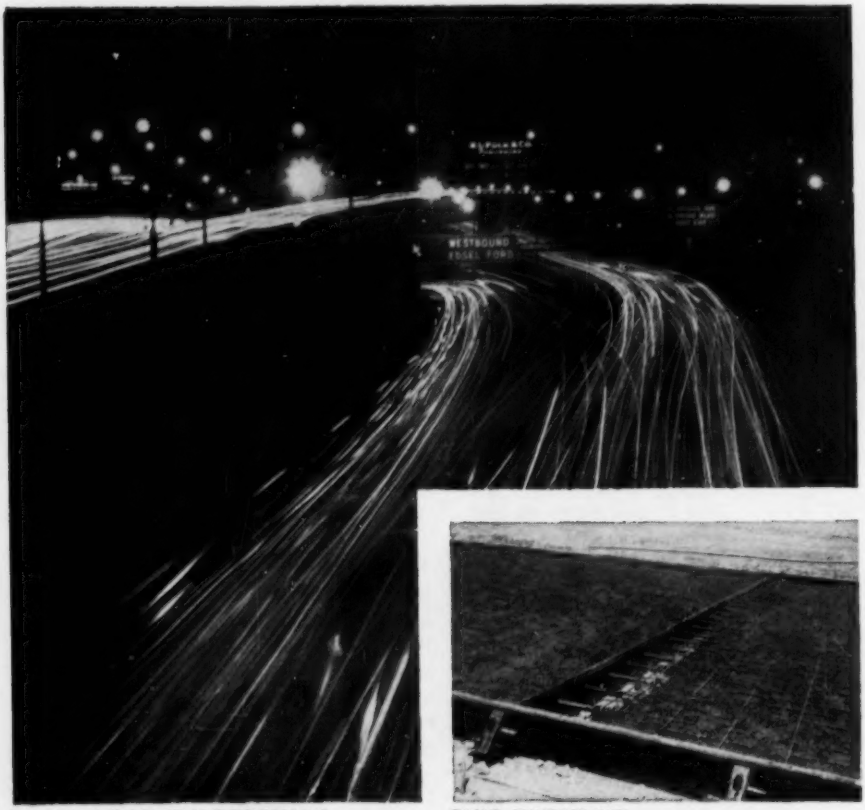
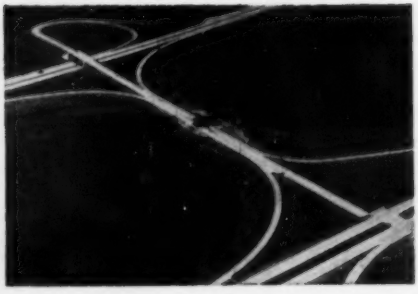


EDSEL FORD EXPRESSWAY

OHIO TURNPIKE

JOHN LODGE EXPRESSWAY

PENNSYLVANIA TURNPIKE



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- ☐ American Welded Wire Fabric for Asphaltic Concrete
- ☐ American Welded Wire Fabric for Airport Runways
- ☐ American Road Joints ☐ Multisafty Highway Cable Guard
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USS

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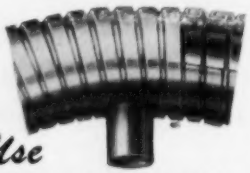
UNITED STATES STEEL



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Dr. Chu receives appointment

Dr. Kuang-Han Chu has been named associate professor of civil engineering at the Illinois Institute of Technology, Chicago. He formerly was acting associate professor at the State University of Iowa.

Honsa addresses convention

William M. Honsa, national authority on sanitation and building codes for swimming pools, was principal speaker at the December 3 luncheon of the National Swimming Pool Institute's first annual convention in Chicago. Mr. Honsa spoke on the necessity for national standardization of health and construction measures.

Appointed Alpha sales manager

H. Eugene Brown has been appointed southern sales manager of Alpha Portland Cement Co., Easton, Pa., to succeed Charles P. Postelle, who has retired.

Attendance figures for Montreal Meeting

Attendance figures at the ninth annual regional meeting of the American Concrete Institute held Oct. 23-27 in Montreal were received too late for publication in the December JOURNAL.

Official registration gave the province of Quebec the largest representation—307, participating in the 3-day program.

Provinces and states represented included:

Quebec	307
Ontario	77
New York	26
Michigan	12
Pennsylvania	10
Nova Scotia	9
Massachusetts	8
New Jersey	6
Illinois	6
New Brunswick	5
Colorado	4
Ohio	4
Washington, D. C.	3

Other ACI members attending were from California, England, Kansas, Minnesota, Mississippi, Saskatchewan, South Carolina, Wisconsin, and Texas.

Building fund . . .

Continued from p. 5

chanics, Kansas State College; and Charles S. Whitney, partner, Ammann and Whitney.

These men are being assisted by numerous area chairmen throughout the country. They have acquainted members with the recent ruling of the Internal Revenue Service that contributions to the Institute are deductible in computing income tax because of ACI's status as a nonprofit educational and technical society.

Honor Roll

February 1—November 30, 1956

Juan A. Sarmiento proposed 41 new members to the Institute putting him in first place with 42 credits. Jose L. Capacete is second with 34 and Jaime de las Casas is third with 13. In fourth place with 10 credits each are Federico Barona de la O, Phil M. Ferguson, and Newlin D. Morgan, Jr.

Every member owes at least one new member to his Institute each year.

Juan A. Sarmiento....42
Jose L. Capacete....34
Jaime de las Casas....13
Federico Barona de la O....10
Phil M. Ferguson....10
Newlin D. Morgan, Jr....10
James A. McCarthy.... 9
S. E. Acker.... 8
W. H. Armstrong.... 8
Walter E. Fisher.... 8
Jacob J. Creskoff.... 6
Martin J. Gutzwiller.... 6
L. M. Legatski.... 6
H. C. Pfannkuche.... 6
George F. Bishop.... 5
George M. Brief.... 5
Arthur N. L. Chiu.... 5
Kenneth Gedney.... 5
Samuel Hobbs.... 5
J. W. Kelly.... 5
J. Antonio Pardo.... 5
Harry C. Saxe.... 5
George L. Blanchard.... 4
M. A. Craven.... 4
Louis A. Gottheil.... 4
Ignacio Martin B.... 4
George Papoulas.... 4
Max Sittenfeld.... 4
Delbert Smith.... 4
Joaquin Spinel L.... 4
Ellis S. Vieser.... 4
Koker Al-Asady.... 3
G. W. Bernard.... 3
W. S. Burke.... 3
Daniel M. Cashdan.... 3
Roger D. de Cossio.... 3
Gordon P. Fisher.... 3
Myle J. Holley, Jr.... 3
E. L. Howard, Jr.... 3
J. E. Jellick.... 3
Masatane Kokubu.... 3
Stanley Kresky.... 3
George T. Mahoney.... 3
Gene M. Nordby.... 3
Constantin Polidoroff.... 3
Melchor Rodriguez C.... 3
C. H. Scholer.... 3
Martin Schulz.... 3
K. E. Whitman.... 3
Mihran S. Agbabian.... 2
W. T. Bates.... 2
R. F. Blanks.... 2
A. H. Brownfield.... 2
S. L. Burns.... 2
T. J. Cavanagh.... 2
Howard F. Christensen.... 2
Miles N. Clair.... 2
Anthony J. Costanza.... 2
W. S. Cottingham.... 2
Claudio Creamer G.... 2
Clayton M. Crosier.... 2
James N. DeSerio.... 2
Julius Dorfman.... 2
William M. Dreisig.... 2
Daniel Ellenberg.... 2
William J. Eney.... 2
Charles A. Engman, Jr.... 2
Arthur Feldman.... 2
Gordon P. Fisher.... 2
Donald R. Frost.... 2
F. S. Fulton.... 2
J. Guillermo Galvan.... 2
Gerald K. Gillan.... 2
William R. Gray.... 2
John S. Hattrup.... 2
Frank T. Higgins, Jr.... 2
Peter H. Hostmark.... 2
H. N. Howe.... 2
M. W. Huggins.... 2
Henry L. Kennedy.... 2
B. T. Kerr.... 2
Fazlur R. Khan.... 2
John C. King.... 2
M. H. Kubba.... 2
Federico Leon.... 2
Arthur A. Levison.... 2
John B. McConville.... 2
R. H. Mahimtura.... 2
Elbert Drew Mayes.... 2
L. J. Meszaros.... 2
A. F. Moore.... 2
Chia Muktabhant.... 2
Henry L. Neve.... 2
Adrian Pauw.... 2

Continued on p. 32

REVIEWER NEEDED

Spanish bulletins on cement production

Various bulletins are being received at ACI headquarters from the Instituto Técnico de la Construcción y del Cemento in Madrid, covering various aspects of cement chemistry and cement production. A volunteer reviewer is needed to keep members informed of the material in these bulletins through the "Current Reviews" section of the JOURNAL. Those interested should write the secretary of the Technical Activities Committee at ACI headquarters.

Abdur-Rahman S. Rasul 2
Leo E. Rivkind 2
Salvador Rodriguez 2
Morris Schupack 2
C. W. N. Sexton 2
Theodore Sheafer 2
Mandrup Skeie 2
Floyd O. Slate 2
Murray Slater 2
G. W. Slee 2
G. B. Southworth 2
Ralph E. Spears 2
John Steinbrugge 2
Miles W. Stone 2
L. J. Sullivan 2
Harry E. Thomas 2
Theo. W. Van Zelst 2
Emin Veral 2
Joseph J. Waddell 2
Ludwik Warycha 2
Byron P. Weintz 2
Thomas J. Whitten 2
Carl R. Wilder 2
Charles C. Zollman 2

New Members

The Board of Direction approved 102 Individual applications, 4 Corporations, 21 Juniors, and 16 Students, making a total of 143 new members. Considering losses due to resignations, and nonpayment of dues, the total membership on Dec. 1, 1956, was 8380.

Individual

ACKLIN, WILLIAM H., JR., Santa Rita, New Mexico (Chf. of Party, Surveying & Office Engrg., Kennecott Copper Corp.)

AGER, J. W. A., London, England (Hd. of Research & Development Dept., Richard Costain Limited)

AGUINALDO, EMILIANO G., Baguio City, Philippines (Asst. Proj. Engr., National Power Corp.)

AISAWA, SHIRO, Santa Clara, Calif. (CE, in Struct. Group, Sverdrup & Parcel, Inc.)

AKERLEY, EDWARD C., Cleveland, Ohio (Sr. Designer, Dept. of Structures, Erie Railroad Co.)

ALBIEZ, JOSEPH H., South Ozone Park, New York (Engr. in Chg. of shipyard basin alterations and construction, Continental Copper & Steel Industries, Inc.)

ALEXANDER, JAMES H., Kirkwood, Mo. (Office Engrg. & Field Engrg., Stone & Webster Engrg. Corp.)

ALEXANDER, W. T., JR., New York, N. Y. (Asst. Chf. Engr.-System, New York Central Railroad Co.)

ALGER, CHARLES GEIB, Spokane, Wash. (Sr. Proj. Engr., H. E. Bovay, Jr., Cons. Engr.)

ALIANAK-CARMONA, HENRY MARK, Rosario, Argentina (CE, Highways, Railroads, Bridges, etc.)

ALLRED, PAUL W., SR., Alcoa, Tenn. (CE, Topco, Inc., Chilhowee Development)

ALSTER, MITCHELL J., Chicago, Ill. (Arch., Civil & Struct. Engr.)

ALWAN, A. M., Madison, Wis. (Stud., Univ. of Wis.)

ARAKAKI, YASUO, Honolulu, Hawaii (CE)

AULT, JORDAN C., Victoria, Texas (Partner, Jordan C. Ault & Robert Rick, Engr. & Arch.)

BARTLETT, SETH FOSTER, Milwaukee, Wis. (Pres., Badger Lightweight Products Co.)

BAZO V., ALFRED, Caracas, Venezuela (Resident Engr., IVECA)

BECKER, LAWRENCE A., Anaheim, Calif. (Proj. Engr., Rockwin Prestressed Concrete Corp.)

BELL, O. R., Syracuse, N. Y. (Owner, Floor Contracting Business)

BELLEW, ROBERT F., Seattle, Wash. (Inspector, concrete constr., Seattle City Light, Skagit Engrs.)

BIRCHARD, RALPH, Colorado Springs, Colo. (Chf., Specifications & Estimates, Air Force Academy Construction Agency)

BORDEN, BENJAMIN F., JR., Jacksonville, Fla. (Chf. Engr., Smith & Gillespie)

BRANTLY, EUGENE P., Birmingham, Ala. (Struct. Engr., Rust Engr. Co.)

BREUER, WALTER F., Omaha, Neb. (Struct. Engr. U. S. Engineer Office, Mo. River Div.)

BURDICK, PERRY C., Phoenix, Ariz. (Struct. Engr., Lescher & Mahoney)

CHEKENE, CONSTANTINE C., San Francisco, Calif. (Struct. Design, John Lyon Reid & Partners, Archs. & Engrs.)

DELGER, L. H., Seattle, Wash. (Facilities Engr., Boeing Airplane Co.)

DICKERSON, W. LOGAN, Youngwood, Pa. (Gen. Mgr., Dickerson Structural Concrete Corp.)

DODSON, C. J., Lubbock, Texas (Sales & Service, The Master Builders Co.)

DUBIN, EUGENE A., Chicago, Ill. (Cons. Struct. Engr.)

ESPINO, GUSTAVO, Caracas, Venezuela (Asst. to Hd) of Dept. of Bridge & Dams, Ministerio de Fomento-Republica de Venezuela)

FAINGOLD, NATALIO, Mendoza, Argentina (CE, Designer & Contr.)

FORT, H. S., JR., Rivera, Calif. (Designing, Testing, Inspection, Specification Work, Master Builders Co.)

GARNER, PATRICK EDWARD, Ankara, Turkey (Resident Engr., Tippetts, Abbett, McCarthy, Stratton)

GATES, GRADY R., Willowick, Ohio (Merchandising & Promotion, The Master Builders Co.)

GENTLEMAN, GREGOR J., Des Moines, Iowa (President, Midwest Concrete Industries)

GIDDINGS, W. A., San Francisco, Calif. (Struct. Engr., Robinson & Giddings)

GIFFING, STANLEY E., Paoli, Pa. (Concrete Technician, Master Builders Co.)

GO, MATEO L. P., Toledo, Ohio (Struct. Engr., Raymond C. Reese)

GONZALEZ G., WALTER, Urbana, Ill. (CE, Daily & Clark, Cons. Engr.)

GRANATH, ANDERS, Manila, Philippines (CE, Atlantic, Gulf & Pacific Co. of Manila)

GREENSTEIN, MILTON, New York, N. Y. (Supervisory Constr. Engr., Navy Dept., District Public Works Office)

GRIFFIN, CHARLES W., JR., Erlton, N. J. (Struct. Engr., Robert E. Lamb, Inc.)

HAEGERMANN, DR. GUSTAV, Niederelbe, Germany (Portland Cementfabrik Hemmoor)

HALLENBECK, VERNON M., Colorado Springs, Colorado (S & C Enterprises, Inc.)

HANEY, JOHN F., Sellersburg, Ind. (Sales Engr., Design & Application, Master Builders Co.)

HANOVER, CLINTON D., JR., New York, N. Y. (Cons. Engr.)

HANSON, A. C., Birmingham, Mich. (Sales Engr., Truscon Steel Division)

HARLEPP, ROGER E., New York, N. Y. (Mgr., European Div., The Master Builders Co.)

HEENAN, C. D., Pontiac, Mich. (Mgr., Pontiac Testing Lab.)

HERRERAS, E. D., Tucson, Arizona (Arch. & Engr.)

HILTON, W. R., Cleveland, Ohio (Struct. Designer, Trygve Hoff & Assocs.)

HUTCHINSON, JAMES S., Jacksonville, Fla. (CE, Partner, Haas, Register, Cummings & Hutchinson, Archs. & Engrs.)

KARG, SERGIO GONZALEZ, Mexico, D. F., Mexico (Gen. Constr. Work)

KISHITANI, KOICHI, Tokyo, Japan (Research Staff, Building Materials Institute, Tokyo University)

KORN, MARTIN P., Boca Raton, Fla. (Cons. Engr.)

KREBILL, ROLAND F., Keokuk, Iowa (Gen. Civil & Arch. Engrg., Krebill Engrg. Co.)

LANGDALE, FREDERICK DARROW, Seattle, Wash. (Civil & Struct. Engr.)

LATHAM, JAMES, Prince Rupert, B. C., Canada (District Engr., Dept. of Fisheries, Govt. of Canada)

LING, JOHN, Denver, Colo. (Lab. Research Work, Taiwan Industry & Research Institute, Taipei, Taiwan)

Continued on p. 56

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Polyvinylchloride=PVC WATERSTOPS

Have you compared "DURAJOINT" with your present water-stop materials? If so, you have already found out that *only* "DURAJOINT" offers *all* of the following important features:

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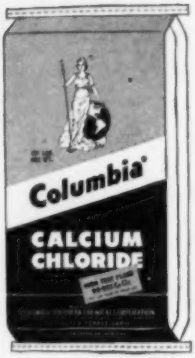

By adding Columbia Calcium Chloride to your Ready Mix in cold weather, you get faster set, accelerated early strength. Forms can be removed and re-used days sooner. The whole construction job moves along ahead of schedule.

Here are the specific advantages you get...

1. Under normal conditions, the initial set is reduced from 3 hours to 1 hour. The colder the weather, the greater are the effects of Columbia Calcium Chloride.
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5. Integral curing is improved. Columbia Calcium Chloride establishes favorable conditions for hydration during the setting and hardening period of concrete, despite adverse conditions of low humidity.

Summer and winter, you benefit greatly from Columbia Calcium Chloride in your concrete—the colder the weather the more pronounced are the advantages.

Columbia Calcium Chloride is not an anti-freeze, however, and it should not be considered as such. Normal cold weather protective measures should always be followed, but the addition of calcium chloride greatly reduces the protection time—often from 7 days to 3 days.

Columbia Calcium Chloride may be added to the mix at the plant or on the job site. It is available in REGULAR FLAKE, 77-80%, and the new HIGH TEST FLAKE which runs 95-98%.

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Continued from p. 32

LOWE, JAMES N., London, England (Managing Director, The Prestressed Concrete Co., Ltd.)
LUCARELLI, B. J., Sea Girt, N. J. (President, B. J. Lucarelli & Co., Inc.)
MAHAFFEY, PAUL IRVINE, Albert Park, Victoria, Australia (Mgr., Concrete Industries (Aust.) Ltd.)
MARTIN, FRED RAY, St. Louis, Mo. (President, F. Ray Martin Engineers, Inc.)
MARTINEAU, RENE, St. Laurent, Que., Canada (Assoc., Bourgeois & Martineau)
MEDRANO, S., JORGE GRACIA, Los Angeles, Calif. (CE, Henry M. Layne, Struct. Engr.)
MEIER, CHARLES A., Berkeley Heights, N. J. (Supv. of Materials & Inspection, Newark Testing Labs.)
MICHALOS, FRANK P., Waukegan, Ill. (Struct. Engr., Designer & Checker, District Public Works)
MOCK, ALVIN M., Cleveland, Ohio (Principal Engr., Havens & Emerson)
MONTGOMERY, ULYSSES J., Los Angeles, Calif. (Lead Struct. Designer, Daniel, Mann, Johnson & Mendenhall)
MOORE, WILLIAM J., Baltimore, Md. (District Engr., PCA)
MOSS, SIDNEY S., York, Pa. (Sales Engr. & Estimator, Brocker Mfg. & Supply Co.)
MUNOZ, MANUEL DE LA CRUZ, Santiago de Cuba, Cuba Assoc. Engr. at Santiago de Cuba Branch, Saenz-Cancio-Martin)
MYLES, ROBERT S., Fredericton, N. B., Canada (Design Engr., Bridge Branch, Dept. of Public Works, Province of N. B.)
NEWMAN, E. M., Kansas City, Mo. (Design & Constr. Supv. for Bridges & Highways, Harrington & Cortelyou, Cons. Engrs.)
OBERST, ALVIN J., Buffalo, N. Y. (Struct. Engr.)
O'HARA, JOHN W., Denver, Colo. (Struct. Designer, Stearns-Roger)
PATTON, NEWTON HARVEY, Pocatello, Idaho (Transit-Mix Concrete, Processed Sand & Gravel)
PEACOCK, EDWARD E., North Sydney, Australia (Engr. Partner, R. Crooks Michell & Peacock, Cons. Struct. Engrs.)
PISTRUI, WILLIAM M., St. Louis, Mo. (Hd. of Struct. Dept., Leo A. Daly Co.)
PRINCE, JORGE, Urbana, Ill. (Research Asst., Univ. of Ill.)
RACKOFF, MELVIN, Pittsburgh, Pa. (Cons. Engr.)
READ, CHARLES B., JR., Long Beach, Calif. (Proj. Engr., Kirk Engrs.)
RITZMAN, FRED WILLIAM, Carson City, Colorado (Mgr., Ritzman Cement Works)
ROBERTSON, EDWARD A., Vancouver, B. C., Canada (Struct. Engr., Robertson, Kolbeins, Teevan & Gallagher, Cons. Engrs.)
ROSE, JOHN STANDISH, New York, N. Y. (Engr., Buck, Seifert and Jost)
RUSCIANI, LEONARD JOHN, Toms River, N. J. (Div. Engr., The Master Builders Co.)
SAUNDERSON, DOUGLAS WILSON, Transvaal, South Africa (Chf. Engr., Mgr., Concrete Construction Corp. (Pty.) Ltd.)
SEWELL, L. J., Rivervale, Western Australia (Gen. Mgr., Swan Portland Cement Limited)
SIMPSON, HARRY F., Caracas, Venezuela (Sr. Partner & Vice-Pres., Civil Engr., Cardone Asociados, S. A.)
STANZEL, L. F., Parma Heights, Ohio (Industrial Sales, Sales Promotion, The Master Builders Co.)
STRATTON, PHILIP R., Agincourt, Ontario, Canada (Sr. Design & Planning Engr., Constr. Div. of the Commission, Ontario Hydro)
SUMMERS, JAMES F., Albany, N. Y. (Cons. Engr., Struct. & Gen.)
VAN TAUSK, DR. G. V., Toronto, Ont., Canada (Master, Construction Technology, Ryerson Institute of Technology)
TAYLOR, RAMON S., Westbury, New York (Struct. Engr., Andrews & Clark)
TOWNSEND, FRANK M., Santurce, Puerto Rico (Asst. Engr., Buck, Seifert & Jost, Cons. Engrs.)
TROY, EDWARD, Chicago, Ill. (Owner, Partner, Eastman Constr. Co.)
TURPIN, O. W., Baltimore, Md. (Partner, Turpin, Wachter & Associates, Cons. Engrs.)
WALLACE, CARL V., JR., Rock Island, Ill. (Div. Engr., Master Builders Co.)
WEBER, JACK W., Westwood, N. J. (Salesman, Contacting Engrs. & Archs., Master Builders Co., Inc.)
WILLIAMS, H. E., Ft. Lauderdale, Fla. (Supv. Design & Structures, H. K. Ferguson)
WITTES, DAVID R., Philadelphia, Pa. (Struct. Engr., David Wittes, Cons. Engrs.)

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Junior

ABASCAL A., FRANCISCO, Caracas, Venezuela (Design & Administrative Engr., Comision de Estudios de la Electrificacion del Rio Caroni)
ALBRIGHT, RICHARD O., South Bend, Ind. (CE, Clyde E. Williams & Assoc., Inc.)
ALLEN, LT. RICHARD G., Seattle, Wash. (Installation or Base Engr., U. S. Air Force)
ALTERMAN, PHILIP J., Philadelphia, Pa. (CE, Perry J. Goldman)
BACKE, TERJE S., Concrete, Wash. (Office Engr., Stone & Webster Engrg. Corp.)
BARKAN, MEL A., Cambridge, Mass. (Struct. Engr., Goldberg LeMessurier & Assoc.)
CERRECOS, FELIPE, Hartford, Conn. (CE, A. J. Macchi, Engrs.)
COLE, ERIC M., Chicago, Ill. (Struct. Designer, De Leuw, Cather & Co.)
FRYAR, ANTHONY CARLYLE, Dallas, Texas (Draftsman, A. J. Boynton & Co.)
JONES, G. PAUL, JR., Macon, Ga. (Company Engrg., Cornell-Young Company)
KARAMISHEFF, EDGAR WILLIAM, Brisbane, Queensland, Australia (Engr., Struct. Design, Brisbane City Council)
KIRK, LEON C., Winsted, Conn. (Jr. Engr., Water Bureau, Metropolitan District)
LAY, MAXWELL GORDON, Alphington, Victoria, Australia (CE, State Electricity Commission of Victoria)
MCBRIDE, ROBERT R., JR., Lafayette, La. (CE, Bonded Roofing & Specialty Co.)
PERRY, EDWARD S., Glen Rock, N. J. (Struct. Designer, Ammann & Whitney)
SHARP, MAURICE L., Chicago, Ill. (CE, Struct., Skidmore, Owings & Merrill)
SULLIVAN, DONALD JOSEPH, Williamsville, N. Y. (Struct. Design Engr., Linde Air Products, C & D Dept.)
TIEMAN, ROBERT E., Austin, Texas (Struct. Engr., Page, Southerland & Page)
WENNING, JOHN, JR., Bloomfield, N. J. (Struct. Engr., Louis Berger & Assocs.)
WHITING, JERRY M., Moscow, Idaho (Mining Engr., U. S. Bureau of Mines)
ZAMORA, REYNALDO I., Manila, Philippines (CE)

Student

BURKHARD, JAMES V., West Lafayette, Ind. (Purdue Univ.)
CHANG, CHUNG-YEN, Toronto, Ont., Canada (Univ. of Toronto)
DYBEVIK, RICHARD J., Madison, Wis. (Univ. of Wis.)
EPPINK, RICHARD T., Urbana, Ill. (Univ. of Ill.)
GARCIA, G. P., MANUEL GOMEZ, Lima, Peru (Universidad de Nacional Ingenieria)
GODBOLD, SAMUEL D., Tunica, Miss. (Univ. of Texas)
KLIMCHAK, GEORGE, Brooklyn, N. Y. (Worcester Polytechnic Inst.)
LATORRE, M., OSCAR, Popayan, Colombia (Univ. Del Cauca)
MILLER, JEROME M., St. Paul, Minn. (Univ. of Minn.)
PARIKH, DILIP, University, Miss. (Univ. of Miss.)
PATEL, DHIRU, New York, N. Y. (Columbia Univ.)
RODRIGUEZ, JOSE J., Urbana, Ill. (Univ. of Ill.)
RUTECKI, WALLACE A., Philadelphia, Pa. (Villanova Univ.)
SAKAMURA, AKIRA, Kyoto, Japan (Kyoto Univ.)
SAVITZKY, Y., Austin, Texas (Univ. of Texas)
SCHOFIELD, MICHAEL C., Fredericton, N. B., Canada (Univ. of New Brunswick)

Tools, Materials, Services

Under this heading note is made of producer literature and products of presumed technical interest to ACI users of tools, equipment, materials, accessories, and special services.

Portable batching plant

A portable concrete batching plant with reported capacity and accuracy of a permanent plant has been developed. Because no field wiring or plumbing is necessary and there are no pits to dig, the "Porto-Plant"—as it is designated—can be in operation within hours after its arrival on location delivering more than 100 cu yd per hr. All that is required is a source of water and power. Components of the plant include: (1) a hinged aggregate bin complete with batchers and scales in position for over-the-road hauling; (2) portable belt conveyor on wheels; and (3) portable Burmeister WeighMeister batching unit.

Other features are plug-in type electrical and air connections, air compressor and water pump and meter as standard equipment and permanent plumbing. The 125-130 ton capacity three-compartment aggregate bin has hinged sides for low clearance when being transported, and can be mounted on skids or wheels. The cement hopper holds 350 bbl. No cement is conveyed by belt at any time. Central mix batching can be accomplished by using the plant in conjunction with a tilting mixer in 1 to 7 cu yd capacity. Batchers are readily transported in position for immediate operation.—L. Burmeister Co., 4535 W. Mitchell St., Milwaukee 14, Wis.

Building and maintenance materials

A series of 50 brochures describing A. C. Horn construction and building maintenance materials is being printed by a manufacturer to give instructions on product application. Presently available are "Liquid Floor Hardener for Maintenance of Concrete Floors," "Floor Hardeners for New Construction," and "Metallic Floor Hardener."—Sun Chemical Corp., 10th St. & 44th Ave., Long Island City, 1, N. Y.

Flow meter bulletin

"Hydrometer for Accurate Measure of Water" is a bulletin describing three designs of flow meters for accurate dosage of water in concrete manufacturing processes. Standard models are designed for cold water. —Hydrometer Aktiengelsellschaft, Postfach, Ansbach, Mfr. (13a), Germany.

Floors and roof test

Two Cofar floors and a Tufcor roof were tested to failure to establish deflections and safe load capacity for the constructions. At 2170 psf, 10.8 times the design live load of 200 psf, the ultimate capacity was reached for the first test on a two-span floor slab, 3½ in. deep, reinforced with corrugated high-strength galvanized steel sheet with transverse wires welded at each corrugation. The 6 ft-8 in. spans were loaded by hydraulic jacks. During the second two-span floor test, the spans were lengthened to 10 ft and the floor thickness increased to 4½ in. One span was tested to failure at a load of 1300 psf, 6.5 times the design live load of 200 psf. At failure, the stress was in excess of 100,000 psf. The fire resistant roof was of 24-gage corrugated galvanized high-strength steel covered with a lightweight insulating concrete fill, 3¼ in. total depth. The two 6 ft-8 in. spans were loaded with an equivalent uniform live load to 77 psf before reaching a limiting deflection of 1/240 of the span length. Roof loading was discontinued after reaching 267 psf.—Granco Steel Products Co., 6506 N. Broadway, St. Louis 15, Mo.

Silicone reference guide

Products are grouped by usage—water repellents, dielectrics, release agents, etc.—to enable engineers to locate a material by what it does as well as what it is in the "1957 Reference Guide to Dow Corning Silicones." Tables and graphs compare various silicones with the materials they are displacing. The 12-page guide is illustrated with application photographs.—Dow Corning Corp., Midland, Mich.

Bulk cement trailer

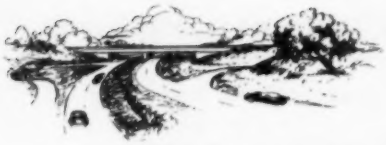
Bulk cement trailer, 18 ft long, uses Airslide method of unloading to eliminate all mechanical contact with the load. Air from the engine-driven blower seeps through fabric panels to activate the load, permitting it to flow over the panels tilted at 5 deg. This causes the load to progress to the low discharge point at the rear. Twin-panel bulk cement units are especially adapted for trailer-train operation. They can be discharged at the rate of 10 to 15 bbl per min.—Fruehauf Trailer Co., 10941 Harper Ave., Detroit, Mich.

Rubber-latex-cement

"Notes on Rubber-Latex-Cement in Construction" reprints are available and present practical considerations of the compounds and their applications. The notes are from "Rubber Developments".—National Rubber Bureau, 1631 K St., N. W., Washington 6, D. C.

Powered wheelbarrow

"Merry Mover" is the name of a powered wheelbarrow equipped with a 25-in. long flat bed, available with 12-in. bed extension. Features are an all-steel welded frame, fingertip clutch control, adjustable fingertip brake control recoil starter, 14 x 4.50 fully pneumatic 4-ply tires with traction-grip tread, differential action ratchet axle, remote control gas throttle and manual, one-hand dumping action. The 1000-lb capacity unit has a 3-hp Clinton or a 2½-hp Briggs & Stratton air-cooled, 4-cycle engine.—Gwin, White & Prince, Inc., Skinner Building, Seattle, Wash.



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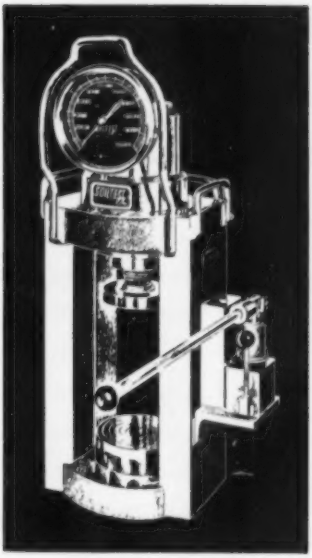

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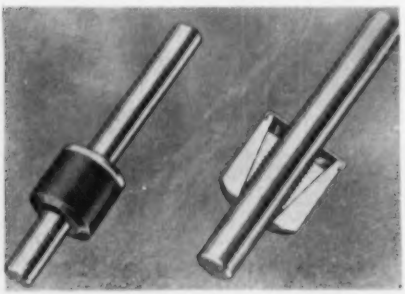

outside internally coned shell that holds two precision tapered wedges and a cap that keeps the wedges in the outside shell.—Morrow Manufacturing Co., R.F.D., No. 1, Old Baptist Rd., East Greenwich, R. I.

Diamond cutting blade

Said to be suitable for contractor or plant that has need for a single blade to handle a variety of masonry cutting jobs is Type S-200-V Cardinal multi-purpose tungsten carbide diamond masonry blade. The 14-in. blade uses a high retention process to hold the diamonds for longer cutting life, according to the manufacturer.—Cardinal Engineering Corp., Philadelphia 27, Pa.

Compression testing machine

Multi-purpose compression testing machine is being introduced as "Versa-tester." It is designed for routine and research compression and flexure testing of such materials as soils, asphalt, mortar, concrete, plastics, metals, wood, and ceramics, according to manufacturer. The tester has a load capacity of 30,000 lb and is said to be accurate to within 1 percent of indicated load. Machine requires floor space of 28 x 24 in. Over-all height is 72 in. A control enables operator to repeatedly apply a set load for nondestructive tests of castings, fabricated shapes, and similar items.—Soiltest Inc., 4711 W. North Ave., Chicago 39, Ill.

Reinforced Concrete Design

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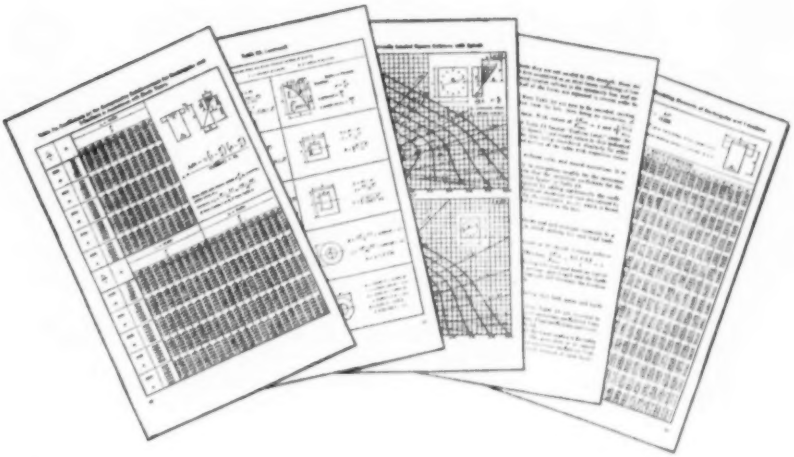

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